



Voice Interoperability Plan for Emergency Responders



VIPER System Overview

- Statewide 800 MHz trunked radio system available for **all emergency responders (local, State, Federal)**
- Goal: 95% in-street portable coverage based on a 3 watt portable radio
- Network infrastructure consisting of towers linked via microwave
- Implementation (build-out), Operations and Maintenance provided by NC Highway Patrol
- End-user requirement to join the network – purchase their own radios

Network Status

- 241 total sites planned for statewide coverage
- 202 sites constructed and on-the-air
- 11 sites are fully funded and under construction
- 28 sites require funding (pending legislative funds beginning 2014-2015)

- VIPER is 84% complete (number of sites) with 202 sites on-the-air
- 65,388 users are currently on the VIPER Network
 - 260 Emergency Responding agencies (including federal, state and local agencies) makeup the 65,388 radio users
 - 3231 end user radios waiting to join system once P25 migration is complete. Target date to complete P25 upgrade is no later than 30 June 2014. New radio additions to commence 1 July 2014.

P25 Upgrade and Tower Construction Items

- Programming and Radio Reconfiguration
- Communications Center Readiness for P25
- Tower Upgrades in advance of P25 system migration
- Procurement and Funding Progress
- Project timeline and target for completion

Programming and Radio Reconfiguration for P25

- Bulk of radio reprogramming was completed 31 December, 2013. Seven (7) counties are working to upgrade some of their portable and mobile radio equipment to be P25 ready. Once this has been completed, all radios will have been reconfigured, ready for the P25 site migration.

Communications Center Readiness for P25

- All SHP centers with the exception of Troop H (Monroe) to P25. Troop H is scheduled to convert prior to 1 February 2014. Orange County Communications has completed their console upgrade to P25 and Cumberland County is scheduled to be complete by 30 April, 2014

Tower Upgrades in Advance of P25 System Migration

- Fifty two (52) sites required modifications to the tower structure to be able to accommodate additional microwave dishes in support of the P25 migration. To date the upgrades at twenty one (21) towers have been completed. The additional microwave dishes are needed to support the increased network requirements for P25. Of the 52 total sites identified that require an upgrade twenty seven (27) have work that is underway at and four (4) have bid packages still in submittal.

Procurement and Funding Progress

- The additional recurring maintenance funds in the amount of \$2,825,471 has been extremely helpful and is much appreciated as we continue to maintain the VIPER system and the current 202 operational sites. Of the thirteen (13) new positions approved this fiscal year, nine (9) new position packages have been sent for approval from OSP.
- An additional \$7m recurring will commence 1 July, 2014 and continue until the completion of the 28 unfunded tower sites are complete.

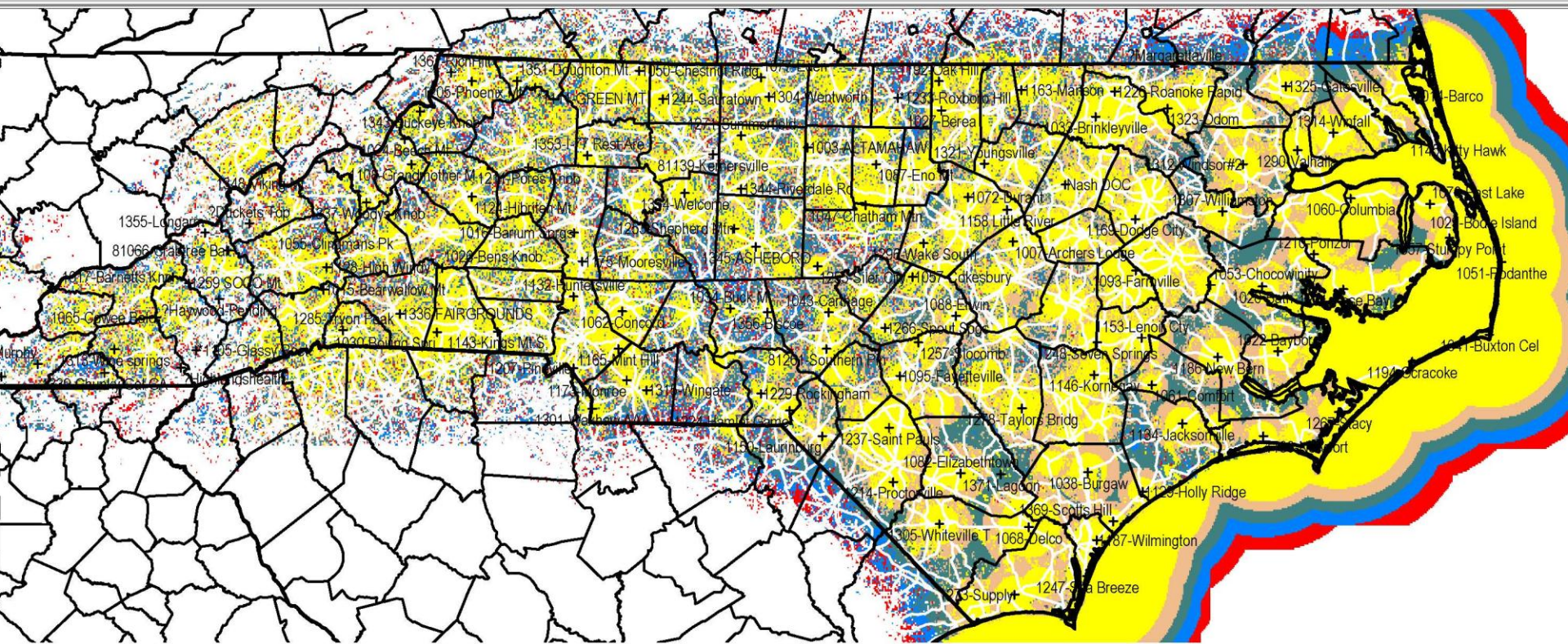
New Tower Construction

- We continue to construct new towers supported by Federal Grant funds. New site activations include Warrenton and Roxboro, Fox Mountain, Potato Knob and Rendezvous Mountain on or before 28 February. We are working to provide seven (7) shovel ready tower projects in advance of 1 July, 2014 and the initial year of legislatively appropriated funds for tower construction such that we can immediately move forward when we receive our certified 2014-15 budget. Replacement of the High Windy tower located in Buncombe County that was damaged during a wind storm in 2013 is scheduled to begin within 60 days and should be done by mid 2014.

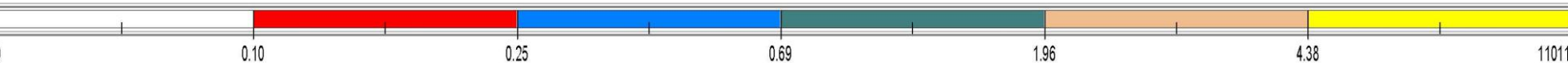
Project Timeline and Target for Completion

- The P25 migration is dependent on the completion of the reprogramming and reconfiguration of all of the radios on the system today, along with the upgrade of the 52 towers and the installation of the new microwave equipment. Once those tasks are complete, the conversion of the current system to P25 will commence. The system conversion is set to begin on Monday, 25 June as soon as the US Open activities are over and remain underway until the conversion is complete.
- New tower sites continue to be added as those sites currently funded come on line. With the current level of funding identified within the VIPER budget, we will be able to ideally construct seven (7) additional new towers each fiscal year beginning with the 2014-2015 budget.

VIPER 800MHZ COVERAGE STUDY Rev 5/7/13



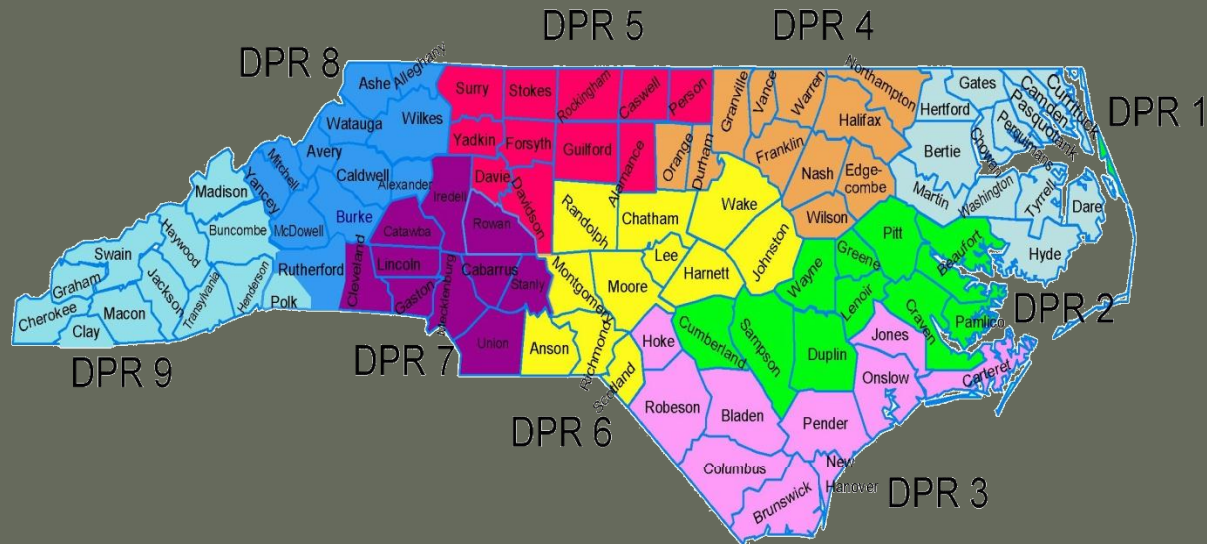
3 - WATT Portable Talk - Back Coverage Analysis



Strategic Technology Reserve (STR)

Overview

- ◆ North Carolina in its effort to provide statewide interoperability for its citizens, identified 4 goals for the State
- ◆ One of the goals is to strategically locate 800, VHF and UHF interoperability portable assets throughout the State
 - This goal gave birth to the State's **Strategic Technology Reserve (STR)** plan
 - ◆ 5 portable towers located throughout the state for statewide coverage
 - ◆ 1 deployable cache radio trailer per DPR
- ◆ North Carolina has 9 Domestic Preparedness Regions (D.P.R)



STR equipment

Portable Tower

- ◆ (1) VHF Repeater
- ◆ (1) UHF Repeater
- ◆ (1) 800 MHz Conventional Repeater
- ◆ (1) 800 MHz IR Site
(3 towers only)
- ◆ Rack Mounted tactical patch solution
- ◆ Minimum of 106' telescoping tower

Deployable cache radio trailer

- ◆ 14 foot utility trailers
- ◆ Accountability tracking software
- ◆ Rack chargers
- ◆ Pelican cases for radio storage
- ◆ 20 VHF, 20 UHF, 20 800MHz, 20 Family Service Radios
- ◆ 6.5 kw portable generator
- ◆ Workbench and basic tools.





Questions?

**For all questions relating to VIPER, please
contact the North Carolina State Highway
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www.nccrimecontrol.org/citizens/VIPER

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